

**REMARKS**

Claims 1-8 are pending in this application. By this Amendment, claims 1, 2 and 4 are amended.

Entry of the amendments is proper under 37 CFR §1.116 because the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issue requiring further search and/or consideration because a dividing portion was recited in the dependent claims; (c) do not present any additional claims; and (d) place the application in better form for appeal, should an appeal be necessary. Entry of the amendments is thus respectfully requested.

The courtesies extended to Applicants' representative by Examiner Heinrich at the interview held July 8, 2009 are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below, which constitute Applicants' record of the interview.

Claim 4 was amended responsive to the rejection under 35 U.S.C. §112, second paragraph. It is respectfully requested that the rejection be withdrawn.

Claims 1-8 were rejected under 35 U.S.C. §103(a) over Hammeke, U.S. Patent No. 4,724,299, in view of Pratt, JP-A-2-258186, and Mihashi, JP-B2-2891378. The rejection is respectfully traversed.

Claim 1 calls for a powder metal holding space that is within a body portion and is divided into plural powder metal holding regions corresponding to plural supply passages. Claim 1 also calls for a body portion that includes a dividing portion that divides the powder metal holding space into the plural powder metal holding regions. Applicants respectfully assert that none of the applied references disclose or suggest these features.

**I. Claimed Features Are Missing Even After The References Are Combined**

Hammeke discloses both a chamber 38 and a gap 94; however, neither can reasonably be interpreted as disclosing the powder metal holding space of claim 1 because neither has any structure that divides the chamber 38 or the gap 94 into plural powder metal holding regions corresponding to plural supply passages, as recited in claim 1. In addition, Hammeke disclosed only a single supply pipe 46. Hammeke thus cannot suggest plural powder metal holding regions. Because Hammeke fails to disclose or suggest plural powder metal holding regions, Hammeke cannot suggest the dividing portion of claim 1.

Pratt discloses a dam 56 that exhausts powder metals uniformly within a nozzle 20. However, Pratt fails to disclose or suggest a body portion with a powder metal holding space that is divided into plural powder metal holding regions by the dam 56, and thus fails to also disclose or suggest the dividing portion of claim 1.

Mihashi appears to disclose a ring shaped powder metal holding space 41 and plural supply passages 43; however, nothing in Mihashi can reasonably be interpreted as teaching or suggesting that the powder metal holding space 41 is divided into plural powder metal holding regions, or that Mihashi discloses or suggests the dividing portion of claim 1.

During the personal interview, the Examiner pointed to Mihashi's Fig. 2B and noted that Mihashi discloses plural supply passages 43 that allegedly correspond to a nozzle portion that has plural discharge passages as recited in claim 1. The Examiner also requested clarification regarding the supply passages 43. However, Mihashi does not disclose the location of the supply passages 43 relative to the single supply passage 31. Applicants assert that it is only reasonable to assert that the supply passage 43 correspond to the discharge passages of claim 1.

Claimed features are therefore missing even after the references are combined, and such features would not have otherwise been known or obvious. In addition, the plural

powder metal holding regions and dividing portion of claim 1 overcome a problem presented and solved as identified in Applicants' page 2, lines 23-30, which is not identified by the combination of references. That is, even after the references are combined (which Applicants do not admit would have been obvious), for example, the combination of references only discloses or suggests a single powder metal holding region, and thus suffer problems in that the volume of powder metal on the lower side and the volume of powder metal on the upper side becomes unbalanced in the powder metal holding region due to gravity when the axis of the powder metal cladding nozzle is tilted with respect to the vertical direction.

## **II. The Examiner's Analysis Is Based On Impermissible Hindsight**

The Examiner argued during the personal interview that because of Mihashi's plural supply passages 43, there must be some type of distribution system (in particular, plural powder metal holding regions) within the nozzle 21 in order to supply powder to the passages 43. The Examiner stated that this is especially true if Pratt's plural supply passages 53 replaced Mihashi's single supply passage 31. The Examiner also stated that it was irrelevant that claim 1 calls for both a body portion and a nozzle portion because Mihashi's nozzle 21 performs the same function and achieves the same results. Applicants disagree.

Claim 1 recites a body portion that has plural powder metal holding regions corresponding to plural supply passages, and a nozzle portion that has plural discharge passages in order to achieve the advantages identified in Applicant's page 2, lines 23-30. It is arbitrary and incorrect to simply divide Mihashi's nozzle 21 into a body portion and a nozzle portion. Mihashi also discloses a single supply passage 31, and thus Mihashi cannot have plural powder metal holding regions. Mihashi thus discloses a distribution system, and that distribution system is a single holding region. Even if Mihashi and Pratt were combined, the references only suggest a single powder metal holding region, and thus suffers the problems identified above.

Applicants thus assert that the Examiner's conclusion of obviousness is based upon improper hindsight because it is based upon knowledge gleaned only from Applicants' disclosure. Even after applying three references in the second Office Action, the Examiner was not able to locate plural powder metal holding regions (or a dividing portion). The Examiner is only able to assert that Mihashi must have plural powder metal holding regions because of Mihashi's plural supply passages 43 and Pratt's plural supply passages 53 by using Applicants' claim 1 as a roadmap. The Examiner's extrapolation of Mihashi and Pratt is based upon knowledge gleaned only from Applicants' disclosure. MPEP §2145(X.A.). The Examiner could not have derived his conclusions set forth in the personal interview without impermissibly relying upon Applicants' claim 1.

### **III. The Obviousness Rejection Is Not Supported**

The obviousness rejection is not supported with a clear and explicit articulation of the reasons why the claimed invention allegedly would have been obvious (including a reasonable rationale as to why the prior art references would have been combined or modified). MPEP §§ 2141(III) and 2142.

Page 3 of the Office Action provides a brief overview of each reference in a single sentence. Despite the fact that none of these sentences discuss the plural powder metal holding regions, the Office Action then states that it would have been obvious to have this feature. During the personal interview, the Examiner simply stated that Mihashi must have this type of distribution system as discussed above because of Mihashi's plural supply passages 43 and Pratt's plural supply passages 53.

There is nothing in Mihashi or Pratt to suggest plural powder metal holding regions, and the Office Action and the Examiner do not explain where the suggestion of plural powder metal holding regions is supported in Mihashi or Pratt. The Examiner is making various statements without providing any support. The Office Action and the Examiner thus fail to

make all of the finding of fact necessary in conjunction with the stated rationale allegedly supporting the conclusions of obviousness. MPEP §2143(A-G).

**IV. The Examiner Must Consider The Dependent Claims**

Dependent claims 2-8 were not given patentable weight because they allegedly do not impart patentable weight. Applicants disagree and traverse the rejection of claims 2-8 below.

As an initial matter, because the Office Action regards the dependent claims as not imparting patentable weight, the Office Action does not provide any explanation as to why the additional features of claims 2-8 are suggested by the combination of references. The obviousness rejection of the dependent claims is therefore not supported with a clear and explicit articulation of the reasons why the claimed invention allegedly would have been obvious (including a reasonable rationale as to why the prior art references would have been modified or combined). MPEP §§2141(III) and 2142. In addition, the Office Action fails to consider all claim limitations in evaluating obviousness. MPEP §2143.03.

Claim 2 recites additional structure and further defines the structure of claim 1. That is, claim 2 recites that the body portion includes an outer side member and an inner side member which is within the outer side member, the powder metal holding space comprises surfaces of the inner side member and the outer side member, and the inner side member includes the dividing portion for dividing the powder metal holding space into the plural powder metal holding regions. The combination of references fails to suggest the side members, the dividing portion and their relation to the other structure of claim 1. In addition, the Office Action fails to identify why the combination of references suggests all of the features of claim 2. Applicants were therefore not given an opportunity to respond to any interpretation that the Examiner may provide.

Claim 3 recites additional structure and further defines the structure of claim 2. That is, claim 3 recites that the inner side member includes the dividing portion and an inner side

body portion, and the dividing portion is attachable to/detachable from the inner side body portion. Applicants respectfully assert that "attachable to/detachable from" clearly describes the structure of the dividing portion as being structure that is capable of being removed. The combination of references fails to suggest the dividing portion and its relation to the other structure of claim 2. In addition, the Office Action fails to identify why the combination of references suggests all of the features of claim 3. Applicants were therefore not given an opportunity to respond to any interpretation that the Examiner may provide.

Claim 4 recites additional structure and further defines the structure of claim 2. That is, claim 4 recites that the dividing portion includes plural dividing members, and widths of the powder metal holding regions are adjustable by adjusting distances between the adjacent dividing members among the plural dividing members. Applicants respectfully assert that "adjustable" clearly describes the structure of the dividing portion as being structure that is capable of adjusting the widths of the powder metal holding regions. The combination of references fails to suggest the dividing portions and their relation to the other structure of claim 2. In addition, the Office Action fails to identify why the combination of references suggests all of the features of claim 4. Applicants were therefore not given an opportunity to respond to any interpretation that the Examiner may provide.

Claim 5 recites additional structure and further defines the structure of claim 1. That is, claim 5 recites that the nozzle portion includes an outer side nozzle member and an inner side nozzle member having plural groove portions in an outer surface, and the discharge passages comprise passages defined by the plural groove portions and a surface of the outer side nozzle member. The combination of references fails to suggest the nozzle members and their relation to the other structure of claim 1. In addition, the Office Action fails to identify why the combination of references suggests all of the features of claim 5. Applicants were

therefore not given an opportunity to respond to any interpretation that the Examiner may provide.

Claim 6 recites additional structure and further defines the structure of claim 5. That is, claim 6 recites that the inner side nozzle member is within the outer side nozzle member such that an end of the inner side nozzle member is recessed with respect to an end of the outer side nozzle member by a predetermined amount in an axial direction of the nozzle portion. The combination of references fails to suggest the nozzle members and their relation to the other structure of claim 5. In addition, the Office Action fails to identify why the combination of references suggests all of the features of claim 6. Applicants were therefore not given an opportunity to respond to any interpretation that the Examiner may provide.

Claim 7 recites additional structure and further defines the structure of claim 1. That is, claim 7 recites that the supply passages are communicated to the powder metal holding regions at a central portion of an arc of each the powder metal holding regions such that the powder metal is supplied to the powder metal holding regions toward a center of the arc. The combination of references fails to suggest the structuring of the supply passages and the powder metal holding regions as defined by claim 7. In addition, the Office Action fails to identify why the combination of references suggests all of the features of claim 7. Applicants were therefore not given an opportunity to respond to any interpretation that the Examiner may provide.

Claim 8 recites additional structure and further defines the structure of claim 1. That is, claim 8 recites that a supply passage of the plural supply passages is communicated to a powder metal holding region of the plural powder metal holding regions at a central portion of an arc of the powder metal holding region such that the powder metal is supplied to the powder metal holding region toward a center of the arc. The combination of references fails to suggest the structuring of the supply passages and the powder metal holding regions as

defined by claim 8. In addition, the Office Action fails to identify why the combination of references suggests all of the features of claim 8. Applicants were therefore not given an opportunity to respond to any interpretation that the Examiner may provide.

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It is respectfully requested that the rejection be withdrawn.

Claim 4 was rejected under 35 U.S.C. §103(a) over Hammeke in view of Pratt, Mihashi, and Kaga, U.S. Patent No. 5,609,781. The rejection is respectfully traversed.

Kaga fails to overcome the deficiencies of the applied references as applied to independent claim 1 and dependent claim 4. The Office Action does not explain where Kaga allegedly suggests the additional features of claim 4, and the Office Action fails to explain why it would have been obvious to combine Kaga's disclosure with the other applied references. It is respectfully requested that the rejection be withdrawn.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.



Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:  
Petition for Extension of Time

Date: August 24, 2009

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